

**CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM
STATEMENT OF INVESTMENT POLICY**

**FOR
CURRENCY OVERLAY PROGRAM**

May 12, 2008

This Policy is effective immediately upon adoption and supersedes all previous currency overlay program policies. This Policy incorporates the Tactical Management Program, the Externally Managed Currency Overlay Program, the Internally Managed Passive Currency Overlay Program, and the Internally Managed Active Currency Overlay Program.

I. PURPOSE

The CalPERS Total Fund Statement of Investment Policy, adopted by the CalPERS Investment Committee ("Committee"), sets forth CalPERS' overarching investment purposes and objectives with respect to all of its investment programs.

This document sets forth the investment policy ("Policy") for the [Currency Overlay Program](#) ("Overlay Program"). The design of this Policy ensures that investors, managers, consultants, and other participants selected by the California Public Employees' Retirement System ("CalPERS") take prudent and careful action while managing the Overlay Program. Additionally, use of this Policy assures sufficient flexibility in managing investment risks and returns associated with the Overlay Program.

There are several components to the Overlay Program:

- A. The static [hedge](#) ratio;
- B. Tactical management of the hedge ratio (Attachment A); and
- C. Implementation of the Overlay Program through:
 - 1. Externally Managed Currency Overlay Program (Attachment B);
 - 2. Internally Managed Passive Currency Overlay Program (Attachment C); and,
 - 3. Internally Managed Active Currency Overlay Program (Attachment D).

The attached sections reflect the components of the Overlay Program. This

section is intended as the explanation of the Overlay Program as a whole, and as the controlling Policy.

The Policy herein is framed in terms of hedging for the Developed Markets portion of the International Equity Program because this is the only program to which currency overlay has long applied. To mitigate currency risk there have been hedges applied to particular strategies. In the event that the currency team may be asked to perform currency functions for other asset classes related to the prudent mitigation of currency risk, this Policy, coupled with any practical considerations specific to those asset classes, will govern unless and until a currency policy specific to those asset classes is approved.

II. STRATEGIC OBJECTIVE

The Overlay Program shall be managed to accomplish the following:

- A. Lower return volatility of the International Equity Program;
- B. Enhance CalPERS' total return;
- C. Hedge currency risk for other assets beyond International Equity; and
- D. Protect CalPERS' International Equity Program from incurring large currency losses during the near term (one-to-three years), at reasonable cost, with effective cash flow management in the settlement of derivative positions.

III. RESPONSIBILITIES

- A. CalPERS' Investment Staff ("Staff") is responsible for the following:
 - 1. All aspects of portfolio management including monitoring, analyzing, and evaluating performance relative to the appropriate benchmark;
 - 2. Reporting to the Committee annually for externally managed programs and quarterly for internally managed programs about the performance of the Overlay Program;
 - 3. Monitoring the implementation of, and compliance with, the Policy. Staff shall report concerns, problems, material changes and all violations of the Policy at the next Committee meeting, or sooner if deemed necessary. These reports shall include explanations of the violations and appropriate recommendations for corrective action.
- B. The General Pension Consultant ("Consultant") is responsible for:

Monitoring, evaluating, and reporting periodically to the Committee, on the performance of the Overlay Program relative to the benchmark and Policy.

- C. The External Manager (“Manager”) is responsible for all aspects of portfolio management as set forth in each Manager’s contract with CalPERS and shall fulfill the following duties:
1. Communicate with Staff, as needed, regarding investment strategy and investment results.
 2. Monitor, analyze, and evaluate performance relative to the agreed-upon benchmark;
 3. Cooperate fully with CalPERS’ Staff, Custodian, and Consultant on requests for information.

IV. PERFORMANCE OBJECTIVE AND BENCHMARK

The primary concern shall be risk control with a secondary objective of return.

There are four separate parts to the Overlay Program and the performance objectives are outlined in the attachments.

V. INVESTMENT APPROACHES AND PARAMETERS

The approaches and parameters for each of the four Overlay Programs are included in the attachments.

VI. DERIVATIVES AND LEVERAGE POLICY

Any action or transaction not expressly permitted by this Policy is prohibited unless presented to and approved by the Committee.

VII. CALCULATIONS AND COMPUTATIONS

Investors, managers, consultants, and other participants selected by CalPERS shall make all calculations and computations on a market value basis, as recorded by CalPERS’ Custodian.

VIII. GLOSSARY OF TERMS

Key words used in this policy and attachments are defined in CalPERS’ Master Glossary of Terms.

Currency Overlay – Externally Managed

Approved by the Policy Subcommittee:	August 11, 1999
Adopted by the Investment Committee:	October 18, 1999
Attached to the Currency Overlay Program:	August 15, 2005

Passive Currency Overlay Program – Internally Managed

Approved by the Policy Subcommittee:	March 16, 2001
Adopted by the Investment Committee:	April 16, 2001
Attached to the Currency Overlay Program:	August 15, 2005

Currency Overlay Program – Overarching Policy with Portfolio Attachments

Approved by the Policy Subcommittee:	June 10, 2005
Adopted by the Investment Committee:	August 15, 2005
Revised by the Policy Subcommittee:	October 16, 2006
Approved by the Investment Committee:	November 13, 2006
Revised by the Policy Subcommittee:	April 21, 2008
Approved by the Investment Committee:	May 12, 2008

TACTICAL MANAGEMENT PROGRAM

May 12, 2008

I. PERFORMANCE OBJECTIVE AND BENCHMARK

The performance objective of the Tactical Management Program ("Tactical Program") is to add value over an economic cycle (approximately 3-8 years) over what a static 25% hedge would have produced, for the entire Developed Markets portion of the International Equity assets.

The means to accomplish this objective is to have a separate account that holds currency contracts equal to the intended adjustment away from the 25% hedge. The change in the value of these contracts measures performance.

II. INVESTMENT APPROACHES AND PARAMETERS

A. Approach

A currency staff committee ("staff committee"), consisting, at a minimum, of the Chief Investment Officer ("CIO"), and the Senior Investment Officer of Global Fixed Income ("SIO") will seek to identify macro trends based on fundamental factors that have a high probability of success. Studies indicate that observable economic factors known to affect currency markets include, but are not limited to interest rate differentials, trade deficits, GDP growth, inflation, monetary policy, fiscal policy and productivity. These economic factors work slowly over time; therefore, the staff committee time focus will be over a cycle, typically 3 to 8 years. A shorter term approach does not always allow sufficient time for economic fundamentals to work their way through to be reflected in currency values. Therefore, it can be difficult for Managers to focus on long term inputs when those inputs can be overwhelmed by short term issues. The staff committee will seek to capitalize on CalPERS' long term investment nature by focusing on the cyclical nature of developed currencies. The CIO would have veto power over any decision.

The variation of the hedge ratio shall be determined by considering the following:

1. Economic fundamentals which work over time;
2. Costs related to the hedge, particularly the cost of carry; and
3. Moves in the hedge ratio would only be made when convincing

evidence exists for long term trends. Return on such decisions should be measured over a cycle, which is calculated in years. It is anticipated that there will be infrequent changes.

B. Parameters

The static hedge ratio is 25% of the currency weights of the Developed Markets portion of the International Equity assets. The staff committee may vary the hedge ratio $\pm 5\%$ (implying a range of 20% to 30% for the hedge ratio.) The staff committee will meet every 3 to 6 months.

EXTERNALLY MANAGED CURRENCY OVERLAY PROGRAM

May 12, 2008

I. STRATEGIC OBJECTIVES

Lowering the return volatility of the International Equity Program is the strategic objective of the International Equity Program. The Externally Managed Currency Overlay Program ("External Program") shall be accomplished through the partial hedging of the currency exposure in the developed markets portion of CalPERS' Passive International Equity Index Fund. This partial hedge is currently targeted at 25%.

The External Program shall employ techniques to balance risk reduction with hedging cost and cash flow management. Therefore, it is expected that only under rare circumstances shall the External Program result in a 100% hedged (zero currency volatility) exposure.

II. PERFORMANCE OBJECTIVE AND BENCHMARK

The External Program controls risk rather than generates return. The External Program shall achieve results specific to the prevailing currency market environment as follows:

- A. In appreciating foreign currency environments, the External Program shall seek to capture approximately 60% of currency gains;
- B. In depreciating foreign currency environments, the External Program shall seek to limit losses to no more than 3% below the fully hedged benchmark; and
- C. In flat or trendless environments, the External Program shall approximate the benchmark results.

The External Program benchmark shall be a percentage of the currency weights of the Developed Markets portion of the Passive International Equity Program, fully hedged.

III. INVESTMENT APPROACHES AND PARAMETERS

A. Approach

- 1. The risk and return characteristics of the international equity assets subject to the Overlay Program (hedged assets) shall differ

significantly from the portion of the international equity assets outside the Overlay Program. Therefore, different strategic risk and return assumptions shall be developed for the Overlay Program for asset allocation planning purposes, in accordance with the Asset Allocation Strategy Policy, incorporated herein by reference.

2. The execution of the External Program shall occur through a program(s)' investments in developed markets where currency market exposure is relatively predictable. Programs most suitable are passive index funds or semi-active approaches.
3. The External Program shall be implemented through the retention of a Manager(s).
4. The viability of the External Program shall be reviewed continually, with a formal review at least every 5 years.

B. Investment Parameters

1. The Manager(s) shall operate under a set of specific guidelines outlining their investment philosophies and approaches, representative portfolio characteristics, permissible and restricted [securities](#) and procedures, and performance objectives representative of their strategic role within the Overlay Program and the investment risk incurred.
2. The Managers shall comply at all times with CalPERS' investment policies including, but not limited to, the following:
 - a. Statement of Policy for Derivatives - External Money Managers; and,
 - b. Manager-Specific Investment Management Guidelines.
3. The Manager(s) shall execute currency transactions in the forward currency markets or in related currency derivative instruments over the long currency positions of the underlying program(s) of assets assigned.
4. The Manager(s) shall monitor their currency positions to avoid [leverage](#).

IV. DERIVATIVES AND LEVERAGE POLICY

A. Forwards, Options, and Swaps.

1. Leverage shall be avoided as cited in Section III. B. 4
2. The External Program may buy or sell non-exchange traded derivatives, which includes [over-the-counter](#) forwards, [options](#), and [swaps](#).
3. Bona fide hedging of foreign currency exposure is the only acceptable strategy.

B. Counterparty Exposure for Forwards, Options, and Swaps

1. The greater of \$500 million or 25% of the total notional derivative exposure can be maintained with any one counterparty for non-exchange traded derivatives.
2. Transactions shall be executed with counterparties [rated](#) A- (S&P), or A- (Fitch) or A3 ([Moody's](#)) or higher by at least 1 of 3 rating agencies.

INTERNALLY MANAGED PASSIVE CURRENCY OVERLAY PROGRAM

May 12, 2008

I. PERFORMANCE OBJECTIVE AND BENCHMARK

The Internally Managed Passive Currency Overlay Program ("Passive Program") shall control risk rather than generate return. The Passive Program shall reduce risk versus the volatility of the underlying equity program. Results shall approximate that of the benchmark, within ± 50 basis points in a 12-month period.

The Passive Program benchmark shall be a percentage of the currency weights of the Developed Markets portion of the Passive International Equity Program, fully hedged.

Any other international program may be passively hedged to reduce risk with the approval of that asset class SIO. Since this is a passive hedge to reduce risk there is no performance objective and hence no benchmark.

II. INVESTMENT APPROACHES AND PARAMETERS

A. Investment Approaches

The Passive Program will be passively managed and will target the developed markets portion of the Passive International Equity Index Fund.

B. Specific Parameters

1. The allocation to the Passive Program shall represent a portion of the total Overlay Program. The percent of assets allocated to the Program shall be determined by considering the following:
 - a. Cost versus expected attained risk reduction versus other alternatives; and
 - b. Optimal impact to the Overlay Program.

Staff shall conduct the appropriate analyses to support such a recommendation.

2. The below table specifies allowable hedge ratio ranges:

Permissible Hedge Ratio Ranges

Benchmark	Hedge Ratio Range
100%	95% - 105%

3. The Passive Program shall track a fully hedged benchmark that reflects the specific currencies of the underlying equity program as specified in Section II. B. 2.
4. The Passive Program shall execute currency transactions in the forward currency markets or in related currency derivative instruments over the long currency positions of the underlying program(s) of assets assigned to it.
5. The Passive Program shall monitor its currency positions to avoid leverage. Currency positions taken shall constitute a designated hedge of the actual international assets identified in the underlying program.
6. CalPERS shall allow wider tracking error should there be deliberate decisions to redefine the developed markets portion of the externally managed Passive International Equity Index Fund. This would include, but is not restricted to the entry or exit of individual countries or the major rebalancing of country weightings within the Index.
7. Implementation of the Passive Program shall comply at all times with CalPERS' investment policies including, but not limited to, the following:
 - a. Statement of Policy for Development of Derivatives Strategies ; and
 - b. Internal Program Operation Procedures Manual.

III. DERIVATIVES AND LEVERAGE POLICY**A. Forwards, Options, and Swaps**

1. Leverage shall be avoided as cited in Section II. B. 5.
2. The Passive Program may buy or sell non-exchange traded derivatives, which includes over-the-counter forwards, options, and swaps.

3. Bona fide hedging of foreign currency exposure is the only acceptable strategy.

B. Counterparty Exposure for Forwards, Options, and Swaps

1. The greater of \$500 million or 25% of the total notional derivative exposure can be maintained with any one counterparty for non-exchange traded derivatives.
2. Transactions shall be executed with counterparties rated A- (S&P), or A- (Fitch) or A3 (Moody's) or higher by at least 1 of 3 rating agencies.

INTERNALLY MANAGED ACTIVE CURRENCY OVERLAY PROGRAM

May 12, 2008

I. PERFORMANCE OBJECTIVE AND BENCHMARK

The performance objective of the Internally Managed Active Currency Overlay Program ("Active Program") is to exceed the currency return of the developed markets portion of the International Equity Program, fully hedged.

The Active Program benchmark shall be a percentage of the currency weights in the Developed Markets portion of the Passive International Equity Program, fully hedged.

II. INVESTMENT APPROACHES AND PARAMETERS

A. Investment Approach

The objective is to add incremental currency return by implementing various active strategies. Active management styles implemented in the program include:

1. Fundamental: Over the long run, currency prices deviate from fair value based on cyclical behavior of economies. Fundamental strategies attempt to identify over and undervalued currencies by using various economic indicators such as inflation, growth or trade data.
2. Technical: Technical strategies attempt to identify markets where prices are moving in clear and predictable trends. Price trends and stress points in currency markets can be identified and exploited using a number of indicators such as moving averages, chart patterns, support and resistance indicators and flow models.
3. Interest Rate (Carry): Carry strategies seek to anticipate currency movements driven by differences and changes in national interest rates. Overweighting currencies with high yields and underweighting currencies with lower yields tends to produce excess returns.
4. Volatility: Volatility strategies are used to exploit mispricing in currency options based on varying interpretations of changes in spot prices.

B. Parameters

1. Shortfall Risk will be controlled by limiting the negative return to 300 basis points for a rolling 12 month period. A violation of this threshold shall require a review by the Senior Investment Officer of Global Fixed Income to determine if a partial or full liquidation of positions is warranted.
2. Benchmark Risk was reviewed by the Consultant who determined that the percentage of the currency weights of the Passive International Equity Program is the appropriate reference point.
3. Currency Risk will be managed by limiting the percentage deviation from the index by the table below. The following table specifies the allowable ranges. The table differentiates between major and minor currency pairs and specifies allowable ranges within which actual allocations can fluctuate. Allowable ranges for major currency pairs are between $\pm 20\%$ of the benchmark weight, while minor currencies can vary between $\pm 10\%$ of the benchmark weights.

Country Currency Allowable Ranges

Major Currency Pairs- Subject to index weights $\pm 20\%$

Currency	Benchmark country weight*	Permissible Range
Euro	34%	14% – 54%
UK Sterling	19%	-1% – 39%
Japanese Yen	19%	-1% – 39%

Minor Currency Pairs- Subject to index weights $\pm 10\%$

Currency	Benchmark country weight*	Range
Canadian Dollar	7%	-3% - 17%
Swiss Franc	6%	-4% -16%
Australian Dollar	5%	-4% - 16%
Hong Kong Dollar	4%	-6% - 14%
Swedish Krona	2%	-8% -12%
Singapore Dollar	1%	-9% - 11%
Norwegian Kroner	1%	-9% - 11%
Danish Krone	1%	-9% - 11%
New Zealand Dollar	0.2%	-10% - 10%

*Benchmark country weights as of March 2008. Total may not sum to 100% due to rounding.

Net Program Weight must remain between 0% and 200%, hedged.

Index currencies and weights will change over time in line with movements in the underlying passive equity index program.

4. Liquidity Risk must be managed in a disciplined manner by maintaining numerous dealing relationships with geographically diverse counterparties.
5. Interest Rate Risk will be controlled by using forward contracts that are within 2 years of the benchmark. Forward currency contracts are a function of domestic relative to foreign country interest rates.

III. DERIVATIVES AND LEVERAGE POLICY

A. Forwards, Options, and Swaps

The Active Program may buy or sell exchange or non-exchange traded derivatives, which includes over-the-counter forwards, options, and swaps.

B. Counterparty Exposure for Forwards, Options, and Swaps

1. The greater of \$500 million or 25% of the total notional derivative exposure can be maintained with any one counterparty for non-exchange traded derivatives.
2. Transactions shall be executed with counterparties rated A- (S&P), or A- (Fitch) or A3 (Moody's) or higher by at least 1 of 3 rating agencies.

Asset Class Glossary: Fixed Income
Policy: Currency Overlay Program
May 12, 2008

Benchmark Risk

Benchmark Risk addressed whether the index chosen is the appropriate reference point for the program in question.

Chief Investment Officer

Heads the CalPERS Investment Office and works with the Investment Committee to develop a long-term investment policy and asset allocation strategy for the Public Employees' Retirement Fund.

Currency

The monetary unit of a sovereign state.

Currency Risk

The risk of hedging currency differently than the index.

Custodian

A bank or other financial institution that provides custody of stock certificates and other assets of an institutional investor.

Derivative

An instrument whose value is based on the performance of an underlying financial asset, index, or other investment. Classes of derivatives include futures contracts, options, currency forward contracts, swaps, and options on futures.

Developed Market

A high-income country, as defined by the World Bank, that most investors consider to have a well-developed operating and regulatory structure for its capital markets. Generally, countries included in the Financial Times-Actuaries Index are considered to be developed markets.

Externally Managed

An outside money management firm retained under contract by CalPERS.

Fitch Ratings

A nationally-recognized credit rating agency that grades the investment quality of bonds in a 10-symbol system. The ranges extend from the highest investment quality, which is AAA, to the lowest credit rating, which is D. Securities rated BBB- or greater are considered investment-grade. Securities rated BB+ or below are considered to be speculative.

Forward Contract

An instrument that allows the purchase or sale of a specific quantity of a commodity,

government security, foreign currency, or other financial instrument at the current price, with delivery and settlement at a specified future date.

General Pension Consultant

An individual or organization that provides specialized professional assistance to the Investment Committee in determining the pension fund's asset allocation model or optimal combination of investments in order to maximize risk-adjusted investment returns in a manner consistent with the State's long-term pension liabilities.

Hedge (Hedging)

A strategy used to offset investment risk. A perfect hedge is one eliminating the possibility of future gain or loss.

Interest Rate Risk

Interest Rate Risk is the price volatility produced by changes in the overall level of interest rates as measured by an option-adjusted duration.

Leverage

A condition where a portfolio's market obligation may exceed the market-value-adjusted capital commitment by the amount of borrowed capital (debt).

Liquidity Risk

Liquidity Risk is the ease with which an issue or specified amount can be sold at or near prevailing market prices.

Moody's Investors Service

A nationally-recognized credit rating agency that grades the investment quality of bonds in a 9-symbol system. The ranges extend from the highest investment quality, which is Aaa, to the lowest credit rating, which is C. Securities rated Baa3 or greater are considered investment grade. Securities rated Ba1 or below are considered to be speculative.

Option

Contracts that give the purchaser the right, but not the obligation, to buy or sell an underlying instrument at a certain price (the exercise or strike price) on or before an agreed date (the exercise period). For this right, the purchaser pays a premium to the seller. The seller (writer) of an option has a duty to buy or sell at the strike price, should the purchaser exercise his right.

Over-the-Counter (OTC)

The market for securities and traded products that are not listed on the major exchanges. OTC options are options with negotiated premium, strike price, and expiration date.

Ratings

Various alphabetical and numerical designations used by institutional investors, Wall

Street underwriters, and commercial rating companies to give relative indications of bond and note creditworthiness. Standard & Poor's and Fitch use the same system, starting with their highest rating of AAA, AA, A, BBB, BB, B, CCC, CC, C, and D for default. Moody's Investors Services uses Aaa, Aa, A, Baa, Ba, B, Caa, Ca, C, and D. Each of the services use + or - or +1 to indicate half steps in between. The top four grades are considered investment grade ratings.

Security

Instrument that signifies an ownership position in a corporation (stock), a creditor relationship with a corporation or governmental body (bond), or rights to ownership such as those represented by an option, subscription right, and subscription warrant.

Senior Investment Officer of Fixed Income

The Senior Investment Officer is responsible for all Global Fixed Income programs and reports directly to the Chief Investment Officer of CalPERS.

Shortfall Risk

The risk of underperforming the benchmark

Standard & Poor's (S&P)

A nationally-recognized credit rating agency that grades the investment quality of bonds in a 10-symbol system. The ranges extend from the highest investment quality, which is AAA, to the lowest credit rating, which is D. Securities rated BBB- or greater are considered investment grade. Securities rated BB+ or below are considered speculative.

Swap

Private agreement between two companies to exchange cash flows in the future according to a prearranged formula.